

SEMINAR

Tuesday, November 6, 2007

3:30 pm – 5:00 pm

3:30 pm: Refreshments

4:00 – 5:00 pm: Seminar, Room 4080 AIR Building

SOME PERSPECTIVES ON ENGINEERING SYSTEMS: INITIATIVES IN UNDERGRADUATE AND GRADUATE EDUCATION

Dr. Joseph M. Sussman, JR East Professor
Department of Civil and Environmental Engineering
Engineering Systems Division
Massachusetts Institute of Technology

The field of engineering systems is the focus of the Engineering Systems Division (ESD), an interdepartmental unit at MIT. Its mission is as follows:

Transforming engineering education, research, and practice through the emerging field of engineering systems

Preparing engineers to think systemically, lead strategically, and address the complex challenges of today's world, for the benefit of humankind

This talk will focus on the key aspects of this vital and growing field and education initiatives ESD has undertaken at the undergraduate and graduate levels.

Dr. Joseph M. Sussman is the JR East Professor (endowed by the East Japan Railway Company) in the Department of Civil and Environmental Engineering and the Engineering Systems Division at the Massachusetts Institute of Technology, where he has served as a faculty member for 38 years. He joined the MIT faculty in 1967, serving as Head of the Department of Civil Engineering from 1980 to 1985 and as Director of the Center for Transportation Studies from 1986 to 1991.

*He is the author of **Introduction to Transportation Systems**, a graduate text, in use at a number of universities in the U.S. and abroad. His book **Perspectives on Intelligent Transportation Systems** was published in 2005. He received the Roy W. Crum Distinguished Service Award from TRB, its highest honor, "for significant contributions to research" in 2001, and the CUTC Award for Distinguished Contribution to University Transportation Education and Research from the Council of University Transportation Centers in 2003.*

Dr. Sussman specializes in the study of "Complex, Large-Scale, Interconnected, Open, Socio-technical (CLIOS) Systems," working in many applications areas, and has developed the CLIOS Process. He has worked extensively on Intelligent Transportation Systems (ITS), helping to build the U.S. national program. While serving as the first Distinguished University Scholar at IVHS AMERICA (1991-92), he was a member of the core group that wrote the Strategic Plan for IVHS in the U.S., a twenty-year plan for research, development, testing and deployment which has shaped the U.S. ITS program. He has worked on the application of computers to engineering problem-solving, specializing in simulation methods and their application to the transportation area, and he contributed to the development of ICES (Integrated Civil Engineering System), among the most widely-used computer systems in the engineering field.